AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

Page 3, line 7 to page 3, line 16.

A battery converts chemical energy within its material constituents into electrical energy in the process of discharging. A rechargeable battery is generally returned to its original charged state (or substantially close to it) by passing an electrical current in the opposite direction to that of the discharge. Presently well known rechargeable battery technologies include Lithium Ion (LiON), Nickel Cadmium (NiCd), and Nickel Metal Hydride (NiMH). In the past, the rechargeable batteries (also known as "dumb" batteries) provided an unpredictable source of power for the portable devices, ~~since~~ because typically, a user of the device powered by the battery had no reliable advance warning that the energy supplied by the rechargeable battery was about to run out.

Page 6, line 5 to page 6, line 22.

Summary

The foregoing need is addressed by the teachings of the present disclosure, which relates to a system and method for integrating the selection and operation of power from battery and system power sources used to provide energy to portable information handling system devices. According to one embodiment, in a method for operating each smart battery included in a smart battery system, the smart battery is initialized prior to the smart battery being electrically coupled to the smart battery system. The smart battery system or an external power source is selected to provide power to an information handling system device. The smart battery includes ~~a smart~~ an electronics device, a charge switch and a discharge switch. The ~~smart~~ electronics

device operates the charge and discharge switches to jointly control an operating condition of the smart battery in response to receiving a control input from a controller of the device. The charge and discharge switches are closed in response to the ~~smart~~ electronics device and the controller being in agreement to charge the first smart battery. The charge or the discharge switch is opened in response to either the ~~smart~~ electronics device or the controller directing either of the switches to be opened.

Page 6, line 24 to page 7, line 11.

In one embodiment, a power supply system provides power to a portable information handling system device. The power supply system is connected to an AC adapter for deriving power from an AC power source. The power supply system includes a smart battery system having at least one smart battery, a battery charger and a power source selector. Each of the smart batteries included in the smart battery system is capable of being individually selected to be operable. Each of the smart batteries includes ~~a smart~~ an electronics device, a charge switch, and a discharge switch. The ~~smart~~ electronics device operates the corresponding charge and discharge switches to control an operating condition of the smart battery. The ~~smart~~ electronics device is also operable to receive a control input from a controller included in the information handling system device to jointly control the operating condition. The charge and discharge switches of each of the smart batteries are operable to be closed in response to the corresponding ~~smart~~ electronics device and the controller being in agreement to charge the corresponding smart battery. The battery charger is operable to receive charge from the AC adapter and provide the charge to a selected one of the smart batteries and the power source selector is operable to select either the smart batteries or the AC power source to provide the power to the device.

Page 8, line 19 to page 9, line 8.

Each smart battery in a portable device imposes certain operating constraints on the operation and selection of the AC and/or the smart battery system power source, especially when two or more smart batteries are present in the smart battery system. Failure to impose the operating constraints, while attempting to reduce the number of components, may result in generating the operating conflicts. There is a need for integrating the selection and operation of power from battery and system power sources commonly used to provide power to portable devices. According to one embodiment, in a method for operating each smart battery included in a smart battery system, the smart battery is initialized prior to the smart battery being electrically coupled to the smart battery system. The smart battery system or an external power source is selected to provide power to the information handling system device. The smart battery includes ~~a smart~~ an electronics device, a charge switch and a discharge switch. The ~~smart~~ electronics device operates the charge and discharge switches to jointly control an operating condition of the smart battery in response to receiving a control input from a controller of the device. The charge and discharge switches are closed in response to the ~~smart~~ electronics device and the controller being in agreement to charge the first smart battery. The charge or the discharge switch is opened in response to either the ~~smart~~ electronics device or the controller directing either of the switches to be opened.

Page 11, line 4 to page 11, line 13.

FIG. 2 illustrates a diagrammatic representation of the smart battery system 110 including smart batteries 112 and 116, according to an embodiment. The first smart battery 112 includes a first ~~smart~~ electronics device 113, a first charge switch 114 and a first discharge switch 115. Similarly, the second smart battery 116 includes a second ~~smart~~ electronics device 117, a second charge switch 118 and a second discharge

switch 119. In one embodiment, each of the switches 114, 115, 118 and 119 are implemented using MOSFET body diode devices. The MOSFET body diodes are advantageously used to minimize the impact of an accidental reverse connection of the battery 112 or 116 or other over-current causing conditions. The MOSFET body diodes are also useful to maximize the availability of power to the device 101.

Page 11, line 15 to page 11, line 21.

The first smart battery 112 also includes at least one rechargeable cell 105 connected in series with the switches 114 and 115, and having a positive terminal 106 and a negative terminal 107 shown as ground. Other cells may be present but are not shown. The terminals 106 and 107 are coupled to the first ~~smart~~ electronics device 113 for monitoring purposes. The first ~~smart~~ electronics device 113 is electrically coupled to the battery charge line 152 and the control line 162 for interfacing with external devices such as the charger device 120 and the controller device 170 respectively.

Page 11, line 23 to page 12, line 4.

The first ~~smart~~ electronics device 113 and the controller 170 jointly control the operating condition such as charging or discharging associated with the first smart battery 112. More specifically, the first ~~smart~~ electronics device 113 monitors the energy level of the rechargeable cell 105. When requested by the controller 170, the first ~~smart~~ electronics device 113 is operable to provide energy stored in the rechargeable cell 105 to the portable device 101 during a discharge operating condition. The first ~~smart~~ electronics device 113 is operable to notify the controller 170 when the energy level of the rechargeable cell 105 falls below a predefined threshold level. During a charge operating condition, the first ~~smart~~ electronics device 113 is operable

to receive a charge from the charger 120 via the charge line 152 and transfer the charge to the rechargeable cell 105 when required.

Page 12, line 6 to page 12, line 13.

Similarly, the second smart battery 116 also includes at least one rechargeable cell 165 connected in series with the switches 118 and 119, and having a positive terminal 166 and a negative terminal 167 shown as ground. In one embodiment, the cell 165 may be the same as the cell 105. Other cells may be present but are not shown. The terminals 166 and 167 are coupled to the second ~~smart~~ electronics device 117 for monitoring purposes. The second ~~smart~~ electronics device 117 includes the battery charge line 152 and the control line 162 for interfacing with external devices such as the charger 120 and the controller 170 respectively.

Page 12, line 15 to page 12, line 26.

Similar to the first ~~smart~~ electronics device 113, the second ~~smart~~ electronics device 117 and the controller 170 jointly control the operating condition such as charging or discharging associated with the second smart battery 116. More specifically, the second ~~smart~~ electronics device 117 monitors the energy level of the rechargeable cell 165. When requested by the controller 170, the second ~~smart~~ electronics device 117 ~~116~~ is operable to provide energy stored in the rechargeable cell 165 to the portable device 101 during a discharge operating condition. The second ~~smart~~ electronics device 117 ~~116~~ is operable to notify the controller 170 when the energy level of the rechargeable cell 165 falls below a predefined threshold level. During a charge operating condition, the second ~~smart~~ electronics device 117 ~~116~~ is operable to receive a charge from the charger 120 via the charge line 152 and transfer the charge to the rechargeable cell 165 when required.

Page 12, line 28 to page 13, line 5.

The first charge switch 114 and the first discharge switch 115 are operable to be placed in either an open or closed position in response to receiving outputs generated by the first ~~smart~~ electronics device 113 and transferred via control lines 182 and 183 respectively. Similarly, the second charge switch 118 and the second discharge switch 119 are operable to be placed in either an open or closed position in response to receiving outputs generated by the second ~~smart~~ electronics device 117 and transferred via control lines 184 and 185 respectively.

Page 13, line 7 to page 13, line 20.

To advantageously reduce occurrences of operating conflicts during a charge operating condition switches 114 and 115 are closed when both, the ~~smart~~ electronics device 113 and the controller 170, agree that the first smart battery 112 is in the charge operating condition. When both are in agreement the ~~smart~~ electronics device 113 generates outputs, which result in closing switches 114 and 115, the outputs being transferred via control lines 182 and 183. In case of a disagreement, the logic i.e., the operating condition determined by the ~~smart~~ electronics device 113 prevails. Operation of switches 118 and 119 is similar. For example, when the controller 170 instructs the first smart battery 112 to charge, but the first smart battery 112 is already fully charged, then the first smart battery 112 is able to override the request from the controller 170 to prevent an overcharge condition. Similarly, if the controller 170 instructs the first smart battery 112 to charge, but the battery 112 detects an over current or over temperature condition, then the battery 112 is operable to disconnect itself and terminate the charge request.

Page 13, line 22 to page 13, line 27.

Similarly, to advantageously reduce occurrences of operating conflicts during non-charge operating conditions switches 114 and 115 are operable to be opened when either the ~~smart~~ electronics device 113 or the controller 170 directs the switch 114 or 115 to be opened. The ~~smart~~ electronics device 113 generates outputs, which result in opening switches 114 or 115, the outputs being transferred via control lines 182 and 183. Operation of switches 118 and 119 is similar.

Page 16, line 13 to page 16, line 23.

FIG. 4 is a flow chart illustrating a method for operating the first smart battery 112 of the smart battery system 110, according to an embodiment. In step 410, the first smart battery 112 is initialized prior to the first smart battery 112 being electrically coupled to the smart battery system 110. In step 420, the first charge and discharge switches 114 and 115 are closed in response to the first ~~smart~~ electronics device 113 and the controller 170 being in agreement to charge the first smart battery 112. In step 430, the first charge switch 114 is opened in response to either the first ~~smart~~ electronics device 113 or the controller 170 directing the first charge switch 114 to be opened. In step 440, the first discharge switch 115 is opened in response to either the first ~~smart~~ electronics device 113 or the controller ~~117~~ 170 directing the first discharge switch to be opened.